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Signed

Dated

18 MAY 2000



17 MAY 99 E447400-8 D01038  
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The Patent Office

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## Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

1. Your reference

JBJ/P152GB

2. Patent application number

(The Patent Office will fill in this part)

9911260.9

3. Full name, address and postcode of the or of each applicant (underline all surnames)

Meritor Light Vehicle Systems (UK) Ltd  
Fordhouse Lane  
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United Kingdom

Patents ADP number (if you know it)

7472707001

If the applicant is a corporate body, give the country/state of its incorporation

A British Company

4. Title of the invention

Cable

5. Name of your agent (if you have one)

WITHERS & ROGERS  
Goldings House  
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London  
SE1 2HW  
United Kingdom

Patents ADP number (if you know it)

001776006

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country	Priority application number (if you know it)	Date of filing (day / month / year)
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7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application	Date of filing (day / month / year)
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8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

Yes

- a) any applicant named in part 3 is not an inventor, or
- b) there is an inventor who is not named as an applicant, or
- c) any named applicant is a corporate body.

See note (d))

## CABLE

The present invention relates to cables and in particular cables for releasing latch mechanisms such as automobile boot latch mechanisms.

People, in particular children, have been known to become trapped within a boot compartment of an automobile in which, once the boot door has been closed there is no means accessible to the child now trapped within the boot for opening the boot door.

It is an object of the present invention to provide a cable which can be operated from two distinct positions.

Thus according to the present invention there is provided a cable for connection at a first cable end to a remote cable pull means and for connection at a second cable end to a latch, movement of the first cable end causing movement of the second cable end and in which an intermediate cable pull means is provided between the first and second cable ends, movement of which causes movement of the second cable end.

In particular preferably when the cable is used to unlatch an automobile boot door the remote release means or the intermediate release means is accessible to a person shut into the boot to enable them to release the boot latch.

The invention will now be described, by way of example only, with reference to figure 1 of the accompanying drawing which shows a cable according to the present invention along with associated components.

With reference to figure 1 there is shown a cable arrangement 10 comprising a cable 12 having a first end 12A and a second end 12B.

Situated between the first and the second ends is an intermediate cable pull means in the form of a cable attachment 14 which is secured fixedly to an intermediate portion of the cable. Cable attachment 14 includes a planar portion 16, the plane of which is aligned substantially perpendicularly to the line of the cable. In this case the cable passes

substantially through the centre of the planar portion, though in further embodiments this need not be the case.

However, preferably in further embodiments a cable attachment projects on at least two opposing sides of the cable.

The cable is sleeved by a first portion of sleeving 18 and a second portion of sleeving 20. Situated between sleeving 18 and 20 is a housing 22 which is open on one side to allow access to the cable attachment 14. The housing includes opposing holes 24 (only one shown) through which the cable can pass and abutments 26 (only one shown) against which the first portion of sleeving 18 and second portion of sleeving 20 act. The housing 22 is fixedly attached to adjacent structure 28 which in this case is the boot lid of an automobile. First end 12A of the cable is connected to a remote cable pull means 30 which in this case is a boot lid mounted key operated cable pull mechanism.

Second end 12B of the cable is connected to latch 32 and in particular the release mechanism (not shown) within latch 32.

Operation of the remote cable pull means causes moveable fork 34 to move the first end 12A of the cable substantially in the direction of arrow A whilst fixed fork 36 ensures that sleeving 18 remains stationary. Movement of the first cable end causes the second cable end release the latch 32.

The intermediate cable pull means is accessible to someone in the boot compartment in particular a child who has inadvertently secured the boot lid closed whilst in the boot compartment. By actuating the intermediate cable pull means the person or child can release themselves from the boot compartment. In this case actuation of the intermediate cable pull means is affecting by pulling on the attachment 14 by placing an index and middle finger of one hand on either side of the cable and pulling on the planar portion of the cable attachment.

It should be noted that abutments 26 are fixed relative to each other and also fixed relative to the adjacent structure 28.

In further embodiments the remote cable pull means could be a boot release lever situated in the passenger compartment of the car fixed relative to the body of the automobile. When the latch is situated in the boot lid, opening and closing of the boot moves the latch relative to the remote cable pull means. Under such circumstances the intermediate cable pull means can be secured either to the boot lid, to move with the latch 32, or can be secured to fixed structure such as a wall of a boot compartment and under such circumstances the latch 32 moves relative to the intermediate release means.

In yet further embodiments the latch and/or the intermediate cable pull means and/or the remote cable pull means can be attached to structure fixed relative to the body of the car.

In further embodiments the remote cable pull means could be actuated by someone trapped in the boot and the intermediate cable pull means could be actuated externally from the boot. Thus by way of example the positions of the boot lid mounted key operated cable pull mechanism 30 of figure 1 could be positioned to act on a ball situated part way along the cable and the cable attachment 14 could be positioned at the first end of the cable and still be accessible to someone trapped in the boot. Under these circumstances the person trapped would actuate what is now the remote cable pull means and someone opening the boot via the key would be acting on the intermediate cable pull means.

When the latch is a boot release latch and the intermediate cable pull means or remote cable pull means is situated within the boot compartment the invention provides for the means of opening the boot by someone trapped inside.

**CLAIMS**

1. A cable for connection at a first cable end to a remote cable pull means and for connection at a second cable end to a latch, movement of the first cable end causing movement of the second cable end and in which an intermediate cable pull means is provided between the first and second ends, movement of which causes movement of the second cable end.
2. A cable as defined in claim 1 in which the intermediate cable pull means is in the form of a cable attachment fixedly attached to the cable.
3. A cable as defined in claim 2 in which the cable attachment projects on at least two opposing sides of the cable.
4. A cable as defined in any preceding claim which is partially sleeved by sleeving.
5. A cable as defined in claim 4 which is partially sleeved between the intermediate cable pull means and the first cable end by a first portion of sleeving.
6. A cable as defined in claim 4 or 5 which is partially sleeved between the intermediate cable pull means and the second cable end by a second portion of sleeving.
7. A cable as defined in claim 5 and 6 in which an end of the first portion of sleeving proximate the intermediate cable pull means abuts a first abutment and an end of the second portion of sleeving proximate the intermediate cable pull means abuts a second abutment in which the first and second abutments are fixed relative to each other.
8. A cable as defined in claim 7 in which the first and second abutments form part of a housing open on at least one side.
9. A latch arrangement including a cable as defined in any preceding claim, a latch and a remote cable pull means.

10. A latch arrangement as defined in claim 9 when dependent upon Claim 5 or 6 in which at least one end of the first or second portion of sleeving proximate the intermediate cable pull means abuts a respective abutment fast with an adjacent structure.
11. A latch arrangement as defined in claim 9 when dependent upon Claim 7 or 8 in which the first and second abutments are fixed fast with an adjacent structure.
12. A latch arrangement as defined in claim 10 or 11 in which the adjacent structure is fixed relative to the latch.
13. A latch arrangement as defined in claim 10 or 11 or 12 in which the adjacent structure is fixed relative to the remote cable pull means.
14. A latch arrangement as defined in any one of claims 10 to 13 in which the latch can move relative to said adjacent structure.
15. A vehicle including a latch arrangement as defined in any one of claims 10 to 14 in which the intermediate cable pull means or remote cable pull means is accessible from within a boot compartment of the vehicle.
16. A vehicle as defined in claim 15 in which the adjacent structure is fixed relative to a boot lid of the vehicle.
17. A vehicle as defined in claim 15 in which the adjacent structure is fixed relative to the vehicle body.
16. A cable or a latch arrangement or a vehicle as herein before described with reference to or as shown in figure 1 of the accompanying drawing.

